Amendments to the drawing figures:

Replacement drawing figures will be submitted at a later date.

8

Remarks

Reconsideration of the claims as amended is respectfully requested.

Status of the Claims

Claims 6, 10, 12, and 20 stand objected to due to informalities.

Claims 1-3, 12, and 14-15 stand rejected under 35 U.S.C. 102(e) over Wuytack et al. (6,421,809).

Claims 4-10 and 16-22 stand rejected under 35 U.S.C. 103(a) over Wuytack in view of Crawford, Jr. et al. (6,456,996).

Claims 11 and 13 stand rejected under 35 U.S.C. 103(a) over Wuytack in view of Subramanina et al. (US 2002/0024993).

Claims 23-26 stand rejected under 35 U.S.C. 103(a) over Wuytack in view of Subramanina in view of Crawford.

Amendments to Overcome Objected-to Claims

Claims 6, 10, 12, and 20, which stand objected to due to informalities, have been amended to overcome these informalities. Accordingly, Applicant respectfully requests that the objections be withdrawn.

Arguments for Rejected Claims

In response to the office action, Applicant has amended Claims 1, 15 and 19 with the intention to move prosecution forward. Applicant reserves the right to revisit the prior scope of the invention as claimed in the claims as filed, as well as other degrees of scope of the invention as may be claimed in future related applications. It is respectfully requested that the examiner consider the amended claims, and examine these claims for their scope, including all equivalents.

Wuytack discloses methods of designing memory systems and architectures such that the architecture is optimized according to a performance criteria based on clock cycle budgets (*see* Abstract).

9

Crawford discloses a method for solving constrained optimization problems (*see* Abstract). The methods disclosed relate particularly for planning in a manufacturing environment (*see* col. 1, ll. 20-40). The methods disclosed rely on making a change to an abstraction and then determining whether the change results in an improvement. The method iterates until a concrete solution is found.

Subrumanian discloses an interconnection of computational units that have a profile matrix of signal processing flows (*see* FIG. 10), which is a logical construction in contrast to the present invention.

In contrast to these references, the claimed invention as amended above is directed to a "method for scheduling an assembled program in an adaptable computing engine", where the method includes "providing a plurality of heterogeneous computation units as hardware resources available to perform a particular segment of the assembled program;" followed by "representing the particular segment as a dataflow graph;" and then "refining a schedule that allocates the plurality of heterogeneous computation units in correspondence with the dataflow graph in an iterative manner until a feasible schedule is achieved.." See Claim 1.

Claims 1-3, 12, and 14-15 stand rejected under 35 U.S.C. 102(e) over Wuytack et al. (6,421,809). Applicant traverses the rejection, but has amended the claims as an effort to move the prosecution forward. Examiner is referred to the amended claims, where the limitation to heterogeneous computation units is include in all claims. Wuytack does not disclose the invention as claimed, and particularly does not disclose any method for scheduling an assembled program in an adaptable computing engine", where the method includes providing a plurality of heterogeneous computation units as hardware resources available to perform a particular segment of the assembled program. Also, Wuytack does not disclose followed by "representing the particular segment as a dataflow graph" and then "refining a schedule that allocates the plurality of heterogeneous computation units in correspondence with the dataflow graph in an iterative manner until a feasible schedule is achieved." See Amended Claim 1 above. Therefore, Wuytack does not disclose,

10

suggest, teach or in any way anticipate the invention as claimed in the amended claims. Accordingly, Applicant respectfully requests that the rejections be withdrawn, and the claims be allowed.

Claims 4-10 and 16-22 stand rejected under 35 U.S.C. 103(a) over Wuytack in view of Crawford, Jr. et al. (6,456,996). Examiner is again referred to the above amended claims, where the limitations of the parent claims of claims 4-10 and 16-22 are not found in Wuytack. Applicant traverses the rejection, but has amended the claims as an effort to move the prosecution forward. Furthermore, these same limitations are not found in Crawford either. Thus, neither Wuytack nor Crawford, whether considered in combination or individually, do not disclose, suggest, teach or in any way anticipate the invention as claimed in the amended claims. Accordingly, Applicant respectfully requests that the rejections be withdrawn, and the claims be allowed.

Claims 11 and 13 stand rejected under 35 U.S.C. 103(a) over Wuytack in view of Subramanina et al. (US 2002/0024993). Examiner is again referred to the above amended claims, where the limitations of the parent claims of claims 11 and 13 are not found in Wuytack. Applicant traverses the rejection, but has amended the claims as an effort to move the prosecution forward. Furthermore, these same limitations are not found in Subramanina either. Thus, neither Wuytack nor Subramanina, whether considered in combination or individually, do not disclose, suggest, teach or in any way anticipate the invention as claimed in the amended claims. Accordingly, Applicant respectfully requests that the rejections be withdrawn, and the claims be allowed.

Claims 23-26 stand rejected under 35 U.S.C. 103(a) over Wuytack in view of Subramanina in view of Crawford. Applicant traverses the rejection, but has amended the claims as an effort to move the prosecution forward. Examiner is referred to Claim 23, which is particularly directed to a method for determining an optimal schedule for a matrix of heterogeneous computation units in an adaptable computing engine, the method including determining a value representative of a cost for a chosen schedule of utilizing the matrix to perform a code segment; adjusting the chosen schedule randomly through

11

small incremental steps until the value reaches an acceptable cost level; and designating a feasible schedule once the acceptable cost level is reached. See Claim 23. Neither Wuytack, Crawford, nor Subramanina, whether considered in combination or individually, do not disclose, suggest, teach or in any way anticipate the use if heterogeneous computation units in an adaptable computing engine. Thus, neither Wuytack, Crawford, nor Subramanina, whether considered in combination or individually, do not disclose, suggest, teach or in any way anticipate the invention as claimed in the amended claims. Accordingly, Applicant respectfully requests that the rejections be withdrawn, and Claim 23 be allowed.

Regarding Claims 24-26, the examiner is again referred to the above amended claims, where the limitations of the parent claims of claims 24-26 are not found in Wuytack. Furthermore, these same limitations are not found in Subramanina either. Thus, neither Wuytack, Crawford, nor Subramanina, whether considered in combination or individually, do not disclose, suggest, teach or in any way anticipate the invention as claimed in the amended claims. Accordingly, Applicant respectfully requests that the rejections be withdrawn, and the claims be allowed.

Regarding new Claim 27, the examiner is invited to examine this claim to further clarify the invention, particularly the language of the utilization of heterogeneous computational elements. No new matter has been added, and support for this claim can be found in the application specification and related drawings as filed. In particular, Claim 27 is directed to a computer implemented method for scheduling an assembled program in an adaptable computing engine, where the adaptable computing engine is configured with a plurality of heterogeneous computational elements. The method includes initializing an assembled dataflow program and a plurality of heterogeneous computational elements to perform predetermined operations on the plurality of heterogeneous computational elements. The method further includes executing an initial schedule on the plurality of heterogeneous computational elements. Finally, the method includes evaluating a cost for the execution of the initial schedule based on a condition of acceptability, where if the cost is acceptable, executing the initial schedule. If the cost is

12

Attorney Docket No. QSTH-01400

unacceptable, the method includes modifying the initial schedule in an incremental manner to produce an alternative schedule. The method then includes evaluating the cost for the alternative schedule, where, if the cost is acceptable, executing the alternative schedule. If the cost is unacceptable, the method includes reverting to the initial schedule and iteratively returning to the modifying the initial schedule until the cost is acceptable. Neither Wuytack, Crawford, nor Subramanina, whether considered in combination or individually, do not disclose, suggest, teach or in any way anticipate the invention as claimed in this new claim, particularly the limitations of the heterogeneous computational elements. Accordingly, Applicant respectfully requests that Claim 27 be allowed.

Regarding the amendments to the claims and also new Claim 27, no new matter has been added. Support for the amendments can be found on pages 5 and 6 of the application as filed, particularly regarding the "heterogeneous computational elements".

If the Examiner finds that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

A Petition for Revival of an Application for Patent Abandoned Unintentionally is also submitted herewith. The Commissioner is authorized to charge $750 for the petition fee and any additional fees due, or to credit any overpayment to Deposit Account No. 50-2421.

Sincerely,

Dated: 02/07/2007

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13